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10/573,279

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EXAMINER

AKBAR, MUHAMMAD A

ART UNIT

PAPER NUMBER

2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,279

Applicant(s)

KONDO, TAKAYUKI

Examiner

Muhammad Akbar

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/25/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim(s) 1,3-6,8,9,10,13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Rudrapatna (U.S. Pub. No. 2004/0092233 A1).

Re claim 1, Rudrapatna discloses a mobile communication system in which variable rate transmission is performed over a downlink radio channel (see title, abstract, para[009],[0015]) among a base station control apparatus (20 of fig.1), a radio base station (14 of fig.1), and a mobile station (16 of fig.1), the radio base station (14 of fig.1) comprising:

a transmission rate determining part (demu. ltiplexer 44 of fig.2) for determining a transmission rate in accordance with a size of transmission data to the mobile station (16 of fig.1) (see fig.1,2 and para[022],[0023]);

(i.e. demultiplexer 44, determine and provide transmission information rate according to received power control rate command from the wireless terminal unit (WTU) i.e. mobile unit)

and a transmission power control (i.e. changing) part (58 of fig.1) for controlling, changing and adjusting a transmission power of the transmission data in accordance with a forward error correction associated with gain difference (determine by the automatic gain controller 48 and power controller 58) and depending on the determined transmission rate (see fig.1,2 and para[0020],[0022],[0023],[0025])

(i.e. transmission power controller 58 command extracting, changing transmission power of a transmission data in accordance with determining the gain (algorithm is used for determining the gain by the automatic gain controller 48 and power controller 58) and quality measurer 54 determine bit error rate based on forward error rate which is associated with gain based on the determining transmission rate)

Re claim 3, as discussed above with respect to claim 1, and Rudrapatna further discloses variable rate (rate increment / decrement) control is performed by setting (i.e. incrementing) and setting (i.e. attaching) rate information by the demultiplexer specifying a transmission rate by each transmission frame in accordance with the transmission data size which is obtained from the mobile station among the base station control apparatus (20), the radio base station (14) and the mobile station(16) (see

fig.1,2,3 and para[0021],[022],[0023]).

Re claim 4, as discussed above with respect to claim 1, and Rudrapatna further discloses the mobile station (16 of fig.3, WTU) includes a transmission rate determining part (controller 70, associated with transmitter and receiver includes circuitry demultiplexer for extracting power control command and adjust transmission power and rate) for estimating a transmission rate from a power distribution of a received signal from base station (see fig.1,3 and para[029],[0032]).

Re claim 5, as discussed above with respect to claim 1, and Rudrapatna further discloses the communication system is a CDMA (Code Division Multiple Access) radio network in which variable rate transmission is performed over a downlink channel (see fig.1,2,3 and para[0014],[0015]).

Re claim 6, Rudrapatna discloses a radio base station (14 of fig.1,2) that is allocated between base station controller (20 of fig.1) and a mobile station (16 of fig.1) wherein variable rate transmission is performed over a downlink radio channel (see title, abstract, para [009],[0015]) among a base station control apparatus (20 of fig.1), a radio base station (14 of fig.1), and a mobile station (16 of fig.1), the radio base station (14 of fig.1) comprising:

a transmission rate determining part (demultiplexer 44 of fig.2) for determining a transmission rate in accordance with a size of transmission data to the mobile station (16 of fig.1) (see fig.1,2 and para[022],[0023]);

(i.e. demultiplexer 44, determine and provide transmission information rate according to received power control rate command from the wireless terminal unit (WTU) i.e. mobile unit)

and a transmission power control (i.e. changing) part (58 of fig.1) for controlling, changing and adjusting a transmission power of the transmission data in accordance with a forward error correction associated with gain difference (determine by the automatic gain controller 48 and power controller 58) and depending on the determined transmission rate (see fig.1,2 and para[0020],[0022],[0023],[0025])

(i.e. transmission power controller 58 command extracting, changing transmission power of a transmission data in accordance with determining the gain (algorithm is used for determining the gain by the automatic gain controller 48 and power controller 58) and quality measurer 54 determine bit error rate based on forward error rate which is associated with gain based on the determining transmission rate)

Re claim 8, as discussed above with respect to claim 6, and Rudrapatna further discloses the radio base station (14 of fig. 2) further comprising:

a transmission frame producing part (44 of fig.2) for encoding by the encoder (32 of fig.2) the transmission data into a transmission frame and

a transmitting part (38 of fig. 2) for transmitting the determined transmission rate and the encoded transmission frame in accordance with the determined transmission power (see fig.1,2 and para [0019],[0022],[0023],[0025]) .

Re claim 9, as discussed above with respect to claim 6, and Rudrapatna further discloses the communication system is a CDMA (Code Division Multiple Access) radio network in which variable rate transmission is performed over a downlink channel (see fig.1,2,3 and para[0014],[0015]).

Re claim 10, Rudrapatna discloses a transmission power control method for a mobile communication system in which variable rate transmission is performed over a downlink radio channel a radio base station (14 of fig.1,2) that is allocated between base station controller (20 of fig.1) and a mobile station (16 of fig.1) wherein variable rate transmission is performed over a downlink radio channel (see title, abstract, para [009],[0015]) among a base station control apparatus (20 of fig.1), a radio base station (14 of fig.1), and a mobile station (16 of fig.1), the radio base station (14 of fig.1) comprising:

a transmission rate determining part (demultiplexer 44 of fig.2) for determining a transmission rate in accordance with a size of transmission data to the mobile station (16 of fig.1) (see fig.1,2 and para[0022],[0023]);

(i.e. demultiplexer 44, determine and provide transmission information rate according to received power control rate command from the wireless terminal unit (WTU) i.e. mobile unit)

and a transmission power control (i.e. changing) part (58 of fig.1) for controlling, changing and adjusting a transmission power of the transmission data in accordance with a forward error correction associated with gain difference (determine by the automatic gain controller 48 and power controller 58) and depending on the determined transmission rate (see fig.1,2 and para[0020],[0022],[0023],[0025])

(i.e. transmission power controller 58 command extracting, changing transmission power of a transmission data in accordance with determining the gain (algorithm is used for determining the gain by the automatic gain controller 48 and power controller 58) and quality measurer 54 determine bit error rate based on forward error rate which is associated with gain based on the determining transmission rate).

Re claim 13, as discussed above with respect to claim 10, and Rudrapatna further discloses variable rate (rate increment / decrement) control is performed by setting (i.e. incrementing) and setting (i.e. attaching) rate information by the demultiplexer specifying a transmission rate by each transmission frame in accordance with the transmission data size which is obtained from the mobile station among the base station control apparatus (20), the radio base station (14) and the mobile station(16) (see fig.1,2,3 and para[0021],[022],[0023]).

Re claim 14, as discussed above with respect to claim 10, and Rudrapatna further discloses the mobile station (16 of fig.3, WTU) includes a transmission rate determining part (controller 70, associated with transmitter and receiver includes circuitry demultiplexer for extracting power control command and adjust transmission power and rate) for estimating a transmission rate from a power distribution of a received signal from base station (see fig. 1, 3 and para [029], [0032]).

Re claim 15, as discussed above with respect to claim 10, and Rudrapatna further discloses the communication system is a CDMA (Code Division Multiple Access) radio network in which variable rate transmission is performed over a downlink channel (see fig. 1, 2, 3 and para [0014], [0015]).

Re claim 16, Rudrapatna discloses a program for a transmission power control method for a mobile communication system in which variable rate transmission is performed over a downlink radio channel (see para [0029]), a radio base station (14 of fig. 1, 2) that is allocated between base station controller (20 of fig. 1) and a mobile station (16 of fig. 1) wherein variable rate transmission is performed over a downlink radio channel (see title, abstract, para [009], [0015]) among a base station control apparatus (20 of fig. 1), a radio base station (14 of fig. 1), and a mobile station (16 of fig. 1), the radio base station (14 of fig. 1), the program can be stored and executed in a computer at the base station (14) and the program perform processing to determine:

a transmission rate determining part (demultiplexer 44 of fig.2) for determining a transmission rate in accordance with a size of transmission data to the mobile station (16 of fig.1) (see fig.1,2 and para[022],[0023]);

(i.e. demultiplexer 44, determine and provide transmission information rate according to received power control rate command from the wireless terminal unit (WTU) i.e. mobile unit)

and a transmission power control (i.e. changing) part (58 of fig.1) for controlling, changing and adjusting a transmission power of the transmission data in accordance with a forward error correction associated with gain difference (determine by the automatic gain controller 48 and power controller 58) and depending on the determined transmission rate (see fig.1,2 and para[0020],[0022],[0023],[0025])

(i.e. transmission power controller 58 command extracting, changing transmission power of a transmission data in accordance with determining the gain (algorithm is used for determining the gain by the automatic gain controller 48 and power controller 58) and quality measurer 54 determine bit error rate based on forward error rate which is associated with gain based on the determining transmission rate)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 2,7,11,12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudrapatna (U.S. Pub. No. 2004/0092233 A1) and in view of Guo (U.S. Pub. No. 2006/0002338 A1).

Re claim 2,7, 11,12, as discussed above with respect to claim 1,6 and 10 and Rudrapatna further discloses a transmission power control (i.e. changing) part (58 of fig.1) for controlling, changing and adjusting a transmission power of the transmission data in accordance with a forward error correction associated with gain difference (determine by the automatic gain controller 48 and power controller 58) and depending on the determined transmission rate (see fig.1,2 and para[0020],[0022],[0023],[0025]).

But Rudrapatna silent about reducing the transmission power when the transmission rate is large, and increases the transmission power when the transmission

rate is small; transmission power is carried out with reference to tables prepared in advance that show the relations among the transmission data size.

However, Guo teaches a transmission rate change in communication network (see title and abstract) wherein base station, base station controller and mobile station have been used for transmitting data associated with power control level (see fig.1,3,14,15(A) and para[0018],[0056],[0057])

Guo further teaches transmission power is reducing when the transmission rate is increasing, and transmission power is increasing when the transmission rate is small (see fig.4 and para[0056],[0057],[0092]).

Guo furthermore teaches a look-up table can be used for controlling transmission power associated with transmission rate (see fig. 10,11 and para[0076],[0077],[0078],[0079]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the transmission power controller for changing transmission power (as taught by Rudrapatna) by incorporating the look-up table with data comprising transmission power associated transmission rate (as taught by Guo) to reduce the level of instability in the network as well as improve transmission power changes as required smoothly.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (7.96)

The following patent are cited to further show the state of the art with respect to clips and bookmarks in general:

U.S. PG. Pub. 2003/0232621 A1 to Brooks teaches forward and reverse link channel dynamic process gain associated with transmission power.

U.S. PG. Pub. 2002/0013157 A1 to Ichikawa teaches radio communication apparatus and transmission power control method.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Muhammad Akbar whose telephone number is (571)-270-1218. The examiner can normally be reached on Monday- Thursday (8:00 A.M.- 5:00P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MA


02-04-08
LANA LE
PRIMARY EXAMINER